

10/058,070.

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January 10, 2005

Commissioner for Patents
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Certificate
JAN 18 2005
of Correction

Art Unit 2838

Re: U.S. Utility Patent
Patent No. 6,727,602 B2; Issued: April 27, 2004
For: **Power Supply For Controlled Parallel Charging And Discharging Of Batteries**
Inventor: Erlend OLSON
Our Ref: 1875.0380001

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Request For Certificate of Correction Under 37 C.F.R. §1.322 with Attachment 1;
2. PTO-1050 Certification of Correction; and
3. ONE (1) return postcard.

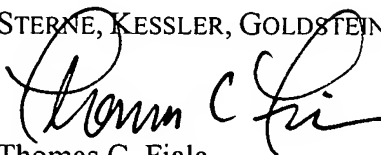
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
January 10, 2005
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Thomas C. Fiala", written over the printed name.

Thomas C. Fiala
Attorney for Patentee
Registration No. 43,610

TCF/mjg
Enclosures



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of:

Erlend OLSON

Patent. No.: 6,727,602 B2

Issued: April 27, 2004

For: **Power Supply For Controlled
Parallel Charging And Discharging
Of Batteries**

Confirmation No.: 2597

Art Unit: 2838

Examiner: Bao Q. Vu

Atty. Docket: 1875.0380001

**Request for Certificate of Correction
Under 37 C.F.R. § 1.322**

Attn: Certificate of Correction Branch

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

It is hereby requested that a Certificate of Correction under 37 C.F.R. § 1.322 be issued for the above-captioned United States Patent. This Certificate of Correction is being requested due to mistakes which appear in the printed patent. These mistakes were made by the U.S. Patent and Trademark Office.

Specifically, the printed patent contains the following errors for which a Certificate of Correction is respectfully requested:

In column 13, line 45 (claim 10), the colon after "comprises" should be deleted.

In column 14, line 6 (claim 11), "power-supply" should be deleted.

Support for the changes in Claims 10 and 11 can be found in the Amendment and Reply filed November 14, 2003, attached as Attachment 1.

JAN 19 2005

Remarks

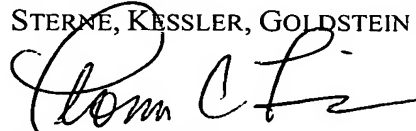
The above-noted corrections do not involve such changes in the patent as would constitute new matter or would require reexamination.

A completed Form PTO/SB/44 accompanies this request, with the above-noted corrections printed thereon. Accordingly, a Certificate of Correction is believed proper and issuance thereof is respectfully requested.

The Commissioner is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Thomas C. Fiala
Attorney for Patentee
Registration No. 43,610

Date: 1/10/05

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JAN 19 2005

Applicants: Erlend OLSEN

Application No.: 10/058,070

Filed: January 29, 2002

For: Power Supply For Controlled Parallel Charging And Discharging Of Batteries (As Amended)

Due Date: November 22, 2003

Confirmation No: 2597

Art Unit: 2838

Examiner: Bao Q. Vu

Docket: 1875.0380001

Atty: TCF/mjg

When receipt stamp is placed hereon, the USPTO acknowledges receipt of the following documents:

1. SKGF Cover Letter;
2. Fee Transmittal Form;
3. Amendment and Reply Under 37 C.F.R. § 1.111;
4. Letter to PTO Draftsman: Submission of Formal Drawings with FOUR (4) sheets of Formal Drawings: (Figures 1-4);
5. Form PTO-2038 Credit Card Payment Form for a total of \$172.00 to cover additional claims fee; and
6. One (1) return postcard

Please Date Stamp And Return To Our Courier





THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Erlend OLSEN

Appl. No. 10/058,070

Filed: January 29, 2002

For: **Power Supply for Controlled
Parallel Charging and
Discharging of Batteries (as
amended)**

Confirmation No.: 2597

Art Unit: 2838

Examiner: Bao Q. Vu

Atty. Docket: 1875.0380001

Amendment And Reply Under 37 C.F.R. § 1.111

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the Office Action dated **August 22, 2003**, Applicant submits the following Amendment and Remarks. This Amendment is provided in the following format:

- (A) Each section begins on a separate sheet;
- (B) Starting on a separate sheet, amendments to the specification by presenting replacement paragraphs marked up to show changes made;
- (C) Starting on a separate sheet, a complete listing of all of the claims:
 - in ascending order;
 - with status identifiers; and
 - with markings in the currently amended claims;
- (D) Starting on a separate sheet, the Remarks.

It is not believed that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 19-0036.

Amendments to the Specification

The title of the application, which appears on both the cover page and abstract of the application should read as follows:

~~BATTERY-OPERATED~~ POWER SUPPLY FOR CONTROLLED PARALLEL
CHARGING AND DISCHARGING OF BATTERIES

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-3. (Cancelled).

Claim 4. (Currently amended) ~~The A power supply of claim 1, for providing charge to a load from a first battery and a second battery, comprising:~~

a first power switch coupled to the first battery and the load;

a second power switch coupled to the second battery and the load; and

a power controller coupled to said first power switch, said second power switch, and the load, said power controller providing charge from the first battery to the load by closing said first power switch and providing charge from the second battery to the load by closing said second power switch;

wherein said power controller monitors a load voltage on the load and causes an increased charge to be supplied to the load when said load voltage is less than a predetermined voltage by increasing the amount of time that at least one of said first power switch or said second power switch is closed, and

wherein said power controller controls said first and second power switch to open and close in an alternating fashion, thereby supplying charge to the load from only one battery at a time.

Claim 5. (Currently amended) ~~The A power supply of claim 1;~~ for providing charge to a load from a first battery and a second battery, comprising:

a first power switch coupled to the first battery and the load;

a second power switch coupled to the second battery and the load; and

a power controller coupled to said first power switch, said second power switch, and the load, said power controller providing charge from the first battery to the load by closing said first power switch and providing charge from the second battery to the load by closing said second power switch;

wherein said power controller monitors a load voltage on the load and causes an increased charge to be supplied to the load when said load voltage is less than a predetermined voltage by increasing the amount of time that at least one of said first power switch or said second power switch is closed, and

wherein said power controller determines an amount of charge that has been supplied from the first and second batteries.

Claim 6. (Original) The power supply of claim 5, wherein said power controller further comprises:

a plurality of counters adapted to determine an amount of time said first power switch has been closed and an amount of time said second power switch has been closed;

wherein said power controller determines an amount of charge that has been supplied from the first battery based on said amount of time said first power switch has been closed and determines an amount of charge that has been supplied from the second battery based on said amount of time said second power switch has been closed.

Claim 7. (Original) The power supply of claim 5, wherein said power controller controls the opening and closing of said first and second power switch to ensure that the discharging of the first battery and the second battery occurs at an equal rate.

Claim 8. (Original) The power supply of claim 5, wherein said power controller stops supplying charge to the load from the first battery when the first battery is depleted and stops supplying charge to the load from the second battery when the second battery is depleted.

Claim 9. (Original) The power supply of claim 5, wherein said power controller increases the amount of charge supplied to the load from the first battery when the second battery is depleted and increases the amount of charge supplied to the load from the second battery when the first battery is depleted.

Claim 10. (Original) The power supply of claim 5, wherein said power supply further comprises:

a display;

wherein said display is adapted to provide information to a user about the amount of charge remaining in the first and second batteries.

Claim 11. (Original) A power supply for providing a charge to a first battery and a second battery from a charge source, comprising:

a first power switch coupled to the first battery and the charge source;

a second power switch coupled to the second battery and the charge source; and
a power controller coupled to said first power switch and said second power switch, said power controller selectively providing a charge from the charge source to either the first battery or the second battery by closing said first power switch or said second power switch, respectively.

Claim 12. (Original) A power supply for providing a charge to a first battery and a second battery from a charge source, comprising:

a first power switch coupled to the first battery and the charge source;
a second power switch coupled to the second battery and the charge source; and
a power controller coupled to said first power switch and said second power switch, said power controller providing charge from the charge source to the first battery by closing said first power switch and providing charge from the charge source to the second battery by closing said second power switch;

wherein said power controller determines an amount of charge remaining in the first and second battery and causes an increased charge to be supplied to the first battery when said charge remaining on the first battery falls below a first predetermined level by increasing an amount of time that said first power switch is closed and causes an increased charge to be supplied to the second battery when said charge remaining on the second battery falls below a second predetermined level by increasing an amount of time that said second power switch is closed.

Claims 13-16. (Cancelled)

Claim 17. (Currently amended) ~~The~~ A power supply of claim 13, for supplying charge to a load from a plurality of batteries, comprising:

a plurality of power switches, wherein each of said plurality of power switches is coupled to one of the plurality of batteries and to the load; and

a power controller coupled to said plurality of power switches;

wherein said power controller controls each of said plurality of power switches to regulate the amount of charge supplied to the load from a corresponding one of the plurality of batteries, and wherein said power controller further comprises: a plurality of counters that track an amount of charge provided by each of the plurality of batteries.

Claim 18. (Currently amended) ~~The~~ A power supply of claim 13, for supplying charge to a load from a plurality of batteries, comprising:

a plurality of power switches, wherein each of said plurality of power switches is coupled to one of the plurality of batteries and to the load; and

a power controller coupled to said plurality of power switches;

wherein said power controller controls each of said plurality of power switches to regulate the amount of charge supplied to the load from a corresponding one of the plurality of batteries, and wherein the ~~power supply~~ power supply is implemented on the same chip as the load.

Claim 19. (Cancelled).

Claim 20. (Original) A power supply for supplying charge to a plurality of batteries from a charge source, comprising:

a plurality of power switches, wherein each of the plurality of power switches is coupled to the charge source and to one of the plurality of batteries; and

a power controller coupled to said plurality of controlled power switches;

wherein said power controller controls said power switches to regulate the amount of charge supplied to the plurality of batteries from the charge source.

Claim 21. (Original) A method for supplying charge to a load from a plurality of batteries, comprising the steps of:

monitoring a load voltage across the load;

comparing said load voltage to a predetermined voltage;

selecting one of the plurality of batteries;

controlling a switch to permit a charge to flow from said selected battery to the load for a time interval when said load voltage is less than said predetermined voltage.

Claim 22. (Original) The method of claim 21, further comprising the step of:

determining the amount of charge provided by said selected battery.

Claim 23. (Original) The method of claim 21, further comprising the step of:

determining the amount of charge sent to the load by said selected battery.

Claim 24. (Original) The method of claim 21, wherein said controlling step further comprises:

- storing a charge from said selected battery in an inductor; and
- releasing said stored charge from said inductor to the load.

Claim 25. (Original). A method for supplying charge to a load from a plurality of batteries, comprising the steps of:

- monitoring a load voltage across the load;
- comparing said load voltage to a predetermined voltage;
- selecting one of the plurality of batteries;
- controlling a switch to permit a quantity of charge to flow from said selected battery to the load when said load voltage is less than said predetermined voltage.

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 4-12, 17, 18, and 20-25 are pending in the application, with claims 4, 5, 11, 12, 17, 18, 20, 21 and 25 being the independent claims. Claims 1-3, 13-16 and 19 are sought to be cancelled without prejudice to or disclaimer of the subject matter therein. Claims 4, 5, 17 and 18 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Objection to the Title

The Examiner has indicated that the title of the invention is not descriptive, and that a new title is required that is clearly indicative of the invention to which the claims are directed. The above amendment to the title is believed to accommodate this objection.

Allowable Subject Matter/Objections

Applicants wish to thank the Examiner for the indication of allowable subject matter in the Office Action mailed August 22, 2003. In that Office Action, the Examiner allowed claims 11, 12 and 20-25. The Examiner also indicated that claims 4-10, 17 and 18 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, Applicants have amended claims 4 and 5 to include all the limitations of cancelled claim 1 and amended claims 17 and 18 to include all the limitations of cancelled claim 13. Applicants therefore respectfully request that the objections to claims 4-10, 17 and 18 be withdrawn.

Rejections under 35 U.S.C. § 102

The Examiner rejected claims 1-3, 13-16 and 19 under 35 U.S.C. § 102(b) as anticipated by U.S. patent No. 5,583,753 to Takayma. In order to expedite allowance of this case, Applicants has cancelled each of these claims without prejudice to or disclaimer of the subject matter therein, thereby rendering these rejections moot. Applicants hereby expressly reserve the right to present the cancelled subject matter in a continuation application.

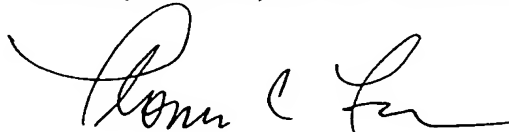
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Thomas C. Fiala
Attorney for Applicant
Registration No. 43,610

Date: 11/14/03

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**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO. : 6,727,602 B2
DATED : April 27, 2004
INVENTOR(S) : Erlend OLSON

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 13, line 45 (claim 10), the colon after "comprises" should be deleted.

In column 14, line 6 (claim 11), "power-supply" should be deleted.

MAILING ADDRESS OF SENDER:

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PATENT NO. 6,727,602 B2

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This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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JAN 19 2005